Agriculture Canada

Regional Development Branch

Agriculture and Food Development
Nova Scotia

A Working Paper

AGRICULTURE IN THE SOUTH SHORE REGION OF NOVA SCOTIA: AN OVERVIEW

A Report Prepared By
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For Agriculture Canada

March, 1985

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1.0 INTRODUCTION

Nova Scotia is comprised of six distinct sub-regions; Valley, South Shore, Halifax, Northumberland, Strait of Canso and Industrial Cape Breton (see map). Each sub-region has a unique set of resources (land, labour, capital) which have resulted in different economic activities. The agri-food industry is established to some degree in all regions.

This report is a review of the current state of the farming sector of the agri-food industry in one region of Nova Scotia. It is intended to provide background information which could facilitate the initial stages of strategy and program development related to the particular needs of the Region. An analysis at the Regional level will permit a better understanding of how any development initiatives will affect the Nova Scotia economy. The report:

a. describes the Regions' agricultural industry in terms of utilization of land, labour and capital, and delineates some aspects of agricultural production, processing and market demand;

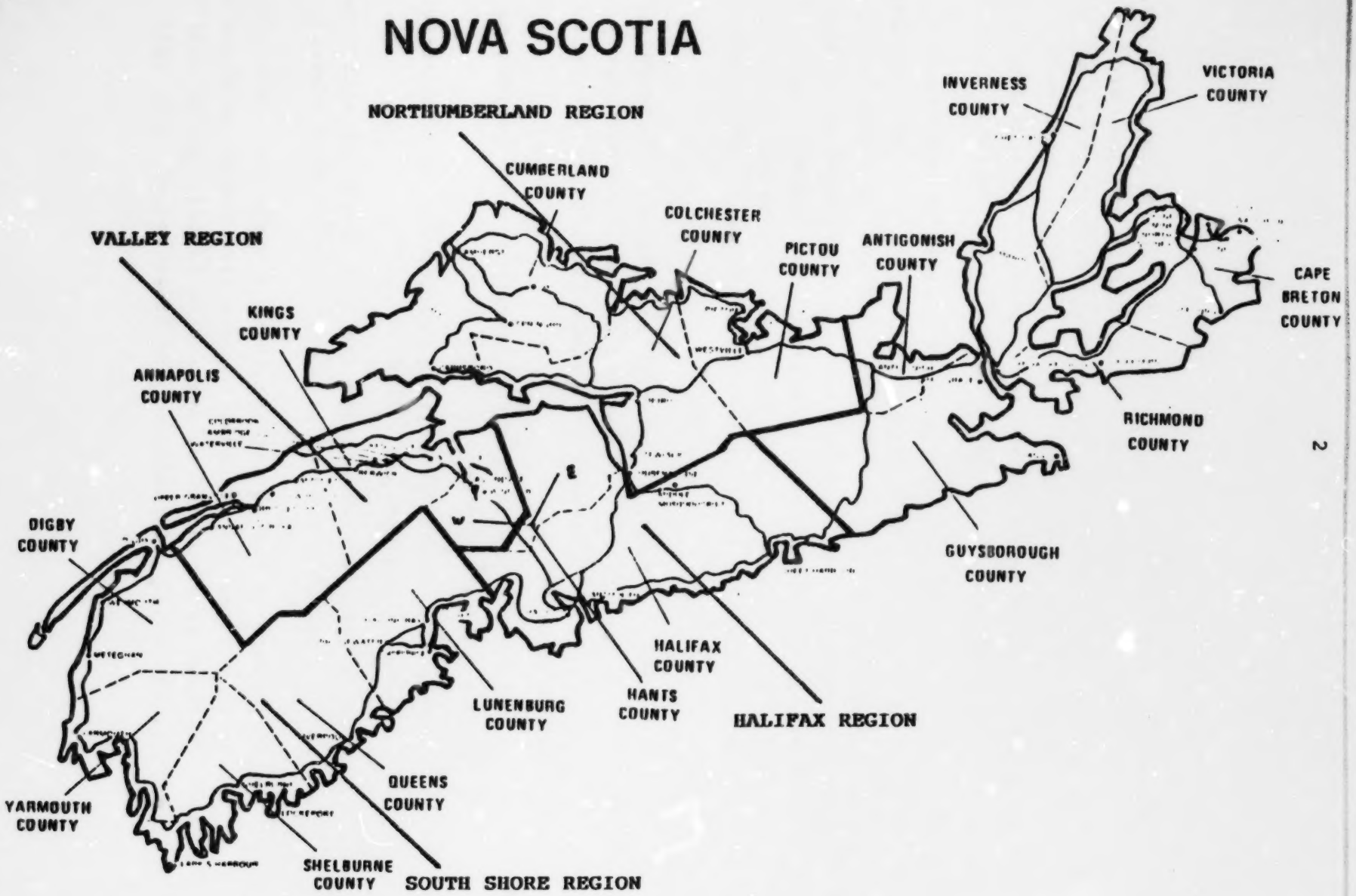
b. establishes opportunities for development of commodities produced in the Region;

c. denotes constraints inhibiting development of commodities produced in the Region; and

d. where appropriate emphasizes the uniqueness of agriculture in the Region, comparing it to the rest of Nova Scotia.

The first part of the report (Sections 2.0 and 3.0) is quantitative in nature, and is based on data from recent censuses of agriculture, as conducted by Statistics Canada, and on soil and climate data. Comparisons are drawn between 1981 farm

NOVA SCOTIA



Map Adapted From Agricultural Directory '85,
N.S. Department of Agriculture and Marketing

data for the Region, and 1981 farm data for the rest of the province. Trends from 1971 to 1981 are compared also for the Region and for the rest of Nova Scotia. Regional census data, by county, are sometimes referred to in the text, and detailed tables of this material may be found in an appendix (Section 5.3).

Census figures cited relate to "census farms" for which the definition has been changed in recent years as follows:

1971: "a farm, ranch, or other agricultural holding on one acre or more with sales of agricultural products, during the 12 month period prior to the census, of $50 or more;"

1981: "a farm, ranch, or other agricultural holding with sales of agricultural products during the past 12 months of $250 or more." Operations with anticipated sales of $250 or more in 1981 were also included.

The second part of the report is more qualitative in nature, and is an evaluation of opportunities and constraints relevant to agricultural development in the Region. This part of the report ties together the following information:

a. quantitative data from Sections 2.0 and 3.0.;

b. results of interviews with several people from the federal and provincial governments (persons contacted and their organizational affiliations are listed in Appendix 5.2);

c. background data from available reports and papers.

This report is one of four similar reports on the Regions of Nova Scotia. A bibliography of material relevant to agricultural development in the Regions may be found in Appendix 5.1.

2.0 THE REGIONS' AGRICULTURAL RESOURCE BASE

2.1 Soils

The South Shore Region, like the rest of Nova Scotia, has no Class 1 agricultural lands. There are only 1,368 hectares of Class 2 land, located in Digby County. Soils in this class have moderate limitations that restrict the range of crops or require moderate conservation practices. The soils are deep, hold moisture well, and have a high productivity level.

The areas of Class 3 soils are much larger. Digby County has over 46,000 hectares. Yarmouth and Lunenburg Counties each have over 34,000 hectares. These soils are rated as fair to good for most classes of crops although certain soil types within the Class 3 grouping may be rated poor for potatoes and vegetables because of topography or stoniness. Their limitations with respect to wetness, moisture holding capacity, and fertility are more severe than Class 2 soils. As a result they require more exacting management and more extensive structural modification, such as drainage. Production costs can be higher than on Class 2 soils.

The areas of Class 4 soils are much smaller than Class 3, but much larger than Class 2. Yarmouth and Digby Counties each had over 20,000 hectares of this class of land. These soils are, for the most part, rated as poor in their suitability for hay, grain, potatoes and vegetables. Most of these soils are rated as fair, or better, for pasture. Steep slopes contributing to erosion limit the cultivation of much Class 4 land.

An addition of areas of Class 2, 3, and 4 land gave a total for arable land in Nova Scotia, or any of its counties. Total arable land in the South Shore Region was 169,758 hectares, 10.8 percent of the Province's total (Table 1). Digby County contained 40 percent of the Region's arable land (Table A1). Yarmouth had 33 percent and Lunenburg 21 percent. Shelburne and Queens Counties had very small proportions.

The South Shore Region's improved arable land made up 7.2 percent of the Region's total arable land in 1971 and this proportion increased to 8.2 percent by 1981. In comparison the proportion of improved arable land to total arable land in the rest of the province was 10.3 percent in 1971 and 11.7 percent in 1981.

Within the Region Lunenburg had a good proportion (18.2 percent) of its total arable land classed as improved land in 1981. The proportion was also high in Queens (21.4 percent) but that County has very little arable land.

The South Shore Region contained 7.8 percent of the Province's improved arable land and 10.8 percent of the Province's total arable land. Fifty percent of the Region's improved land was in the County of Lunenburg. Yarmouth contained 24 percent and Digby, 18 percent.

TABLE 1: South Shore Region and rest of Nova Scotia: Arable Land

	SOUTH SHORE REGION	REST OF NOVA SCOTIA	NOVA SCOTIA
Amount of:			
1971 Improved Arable Land (ha)	12,190	144,032	156,222
Residual Arable Land (ha)	157,568	1,259,192	1,416,760
Total Arable Land (ha)	169,758	1,403,224	1,572,982
Improved Land as Proportion of Total Arable Land (%)			
1971	7.2	10.3	9.9
1981	8.2	11.7	11.3
Proportion of Nova Scotia's:			
1971 Improved Arable Land (%)	7.8	92.2	100.0
Residual Arable Land (%)	11.1	88.9	100.0
Total Arable Land (%)	10.8	89.2	100.0
Proportion of Arable Land Classed as:			
Class 2 (%)	.8	12.2	11.0
Class 3 (%)	73.4	60.6	62.0
Class 4 (%)	25.8	27.2	27.0
	100.0	100.0	100.0

Source: Derived from Arbour, J.H., Residual Arable Land in the Maritime Provinces Lands Directorate, Environment Canada, 1981

2.2 Climate

Nova Scotia has more frequent storms during the year than any other part of Canada. The frequent passing of low pressure areas, associated with bad weather and the maritime location provide Nova Scotia with substantial precipitation. The climate is a modified continental type, characterized by a wide range of temperature. Areas near the coast have milder winters and cooler summers, and have a longer frost-free period. The longer season is offset by cooler temperatures and fewer heat units are available for plant growth.

Distance from the coast and land elevation determine local variations in climate. The province can be divided into eight climatic regions.

The South Shore Region contains parts of three of the climatic regions:

1. A narrow coastal strip along the Bay of Fundy, north from Yarmouth, has a long cool summer, mild winter, frequent fog and moderate precipitation.

2. The inland part of the Region is land that has been worn down almost to a plain by erosion, and this land slopes upward from the Atlantic coast. Rainfall is high and temperatures higher than in eastern Nova Scotia.

3. Part of the Region is in the Atlantic coastal area, and the coastal influence produces the coolest summer and warmest winter temperatures in the Province.

Annual precipitation in the South Shore Region ranges from about 1,300 mm along the coast to more than 1,400 mm inland. Total precipitation from May to September inclusive ranges from 450 to over 475 mm. The area has 150 frost free days along the coast and the inland area can be as low as 110 days.

An area in Queens and Lunenburg Counties near the coast has 2,400 corn heat units, and a fairly large surrounding area has 2,200 to 2,400 heat units. Another large portion of the Region has 2,000 to 2,200 heat units.

3.0 THE REGIONS'AGRICULTURE: RECENT TREND AND CURRENT STATUS

3.1 Resource Utilization

The South Shore Region reported 1,073 census farms in 1971 (Table 2). By 1981 this number had declined by 21 percent to 853 farms. In the rest of the province census farm numbers had fallen from 4,935 to 4,192, a decline of 15 percent.

Within the South Shore Region the sharpest decline occurred in Yarmouth County where farm numbers fell by 27 percent between 1971 and 1981. Farm numbers declined in Shelburne (25%) and Lunenburg (27%) counties over the same period. Digby County farms declined by only 6 percent while in Queens County farm numbers increased by 8 percent over the 1971 to 1981 period. (Appendix Table A-2)

The decline in South Shore Region farm numbers was accompanied by a 26 percent decrease in the area of farmland during the 1971-1981 period. In the rest of the province an 11 percent decline occurred in the area of farmland during the same period. The average farm size in the Region declined from 72 hectares in 1971 to 67 hectares in 1981. In the rest of the province, the average farm size increased from 93 hectares in 1971 to 98 hectares in 1981.

When these farms were classified according to their total land area, shifting patterns of size distribution emerged. The number of small farms (less than 53 hectares) and medium farms (97 - 161 hectares) in the South Shore Region both declined slower than total farm numbers. In all other farm size classes farm numbers declined faster than total farm numbers. In the rest of the province, the number of

TABLE 2: South Shore Region and rest of Nova Scotia: Farm numbers and land utilization

	SOUTH SHORE REGION			REST OF NOVA SCOTIA		
	1971	1981	1981 as % of 1971	1971	1981	1981 as % of 1971
Total Number of Farms	1,073	853	79	4,935	4,192	85
Total Area of Farms (000 ha)	76.99	56.8	74	461.20	409.21	89
No. of Farms by Land Area						
53 ha.	590	490	83	1,947	1,759	90
53 - 96 ha.	244	166	68	1,316	948	72
97 - 161 ha.	123	118	96	902	766	80
162 - 226 ha.	60	44	73	413	357	86
226 ha.	56	35	63	357	362	101
No. of Farms by Improved Land Area						
4 ha.	408	242	59	810	648	80
4 - 27 ha.	572	471	82	2,415	1,761	73
28 - 52 ha.	56	91	163	935	801	86
53 - 72 ha.	20	22	110	340	339	100
73 - 96 ha.	7	12	171	199	260	131
97 - 161 ha.	8	12	150	171	262	153
161 ha.	2	3	150	65	121	186
Use of Farm Land - Hectares						
Improved	12,209	13,906	114	144,013	164,076	114
- Crops	5,992	6,994	117	92,407	105,788	114
- Pasture	3,922	4,099	105	39,571	42,007	106
- Summer Fallow	221	394	178	2,319	4,760	205
- Other	2,074	2,419	117	9,833	11,522	117
Unimproved	65,742	42,908	65	316,114	245,148	78
- Woodland	51,285	34,701	68	248,552	206,141	83
- Other	14,457	8,207	57	67,562	39,007	58

Source: Statistics Canada Census of Agriculture

small farms (less than 53 hectares) and the number of farms 162 - 326 hectares in size declined at a slower rate than the total number of farms in the rest of the province. The number of farms of greater than 226 hectares showed a marginal increase (1 percent) from 1971 to 1981. The remaining two farm class sizes declined at a faster rate than the decline in total farm numbers.

While total farmland on South Shore Region farms declined 26 percent between 1971 and 1981, the area of improved land increased 14 percent. Unimproved land, by comparison, declined 35 percent, so that in 1981 24 percent of South Shore Region farmland was classed as improved and 76 percent as unimproved. All of the decline in total South Shore Region farmland between 1971 and 1981 was made up of unimproved land.

When county figures were examined for the South Shore Region Queens County showed a 127 percent increase in its improved land base and it was the only county to show an increase in its unimproved land. Digby and Lunenburg counties showed increases in their improved land base. Shelburne and Yarmouth counties improved land base declined from 1971 to 1981.

In the rest of Nova Scotia the improved land area increased 14 percent from 1971 to 1981. The area of cropland increased by approximately 13,000 hectares (14 percent) while improved pasture and summer fallow increased by approximately 2,000 hectares (6 percent) and 2,000 hectares (105 percent) respectively.

The 1971 and 1981 distribution of South Shore Region farms according to their area of improved land was more heavily weighted toward small scale farms than in the rest of Nova Scotia:

	South Shore Region		Rest of Nova Scotia	
Area of Improved Land	1971	1981	1971	1981
Less than 28 hectares	98%	84%	64%	57%
28 - 72 hectares	7%	13%	26%	27%
More than 72 hectares	2%	3%	10%	16%

A comparison of the farm size distribution in 1981 with the distribution in 1971 shows that the rate of disappearance of small farms (less than 28 hectares of improved land) was approximately the same for both parts of the province. The number of medium size farms (28 - 72 hectares) increased at a faster rate in South Shore Region farms than in the rest of the province.

A number of characteristics of the farm labour force in the South Shore Region and the rest of the province were identified (Table 3).

Recalling that farm numbers declined 21 percent in the South Shore Region and 15 percent in the rest of the province over the period, it was interesting to note that the number of young farmers (under 35 years of age) increased 52 percent in the South Shore Region compared to 43 percent in the

TABLE 3: South Shore Region and rest of Nova Scotia: Farm labour characteristics

	SOUTH SHORE REGION			REST OF NOVA SCOTIA		
	1971	1981	1981 as % of 1971	1971	1981	1981 as % of 1971
Number of Farms by Age of Operator						
- Under 25 years	13	19	146	47	71	151
- 25-34 years	88	134	152	454	644	142
- 35-44 years	189	183	97	883	937	106
- 45-54 years	314	217	69	1,390	1,015	73
- 55-64 years	293	179	61	1,334	933	70
- 65 years and older	176	121	69	827	592	72
Total Days of Off Farm Work by Farm Operator During Previous Year	92,960	89,290	96	365,530	247,452	68
No. of Farms Reporting	544	459	84	2,197	2,138	97
Average Per Farm Reporting	171	195	114	166	116	70
Total Weeks Paid Labour	9,497	15,721	166	102,806	136,020	132
No. of Farms Reporting	319	272	85	1,964	1,910	97
Average Per Farm Reporting	30	58	194	52	71	136

Source: Statistics Canada Census of Agriculture

rest of the province. The number of farmers 55 years of age and over declined 36 percent in the South Shore Region compared to 29 percent in the rest of the province. The resulting relative age distribution in the two parts of the province changed as follows:

	South Shore Region		Rest of Nova Scotia	
Age of Farmers	1971	1981	1971	1981
Less than 35 years of age	9%	18%	10%	17%
35 - 54 years of age	47%	47%	46%	47%
55 years of age and older	44%	35%	44%	36%

Fifty-four percent of South Shore Region farm operators reported off-farm work during 1980 compared to 51 percent in 1970. In the rest of the province 51 percent of farm operators reported off-farm work in 1980 compared to 45 percent in 1970. South Shore Region farmers indicating off-farm work, worked an average of 195 days off the farm. This was less than the average of 115 days of off-farm labour in the rest of the province. In the South Shore Region the number of days worked off the farm increased by three weeks after 1971. In comparison, the number of days worked off the farm in the rest of the province decreased by seven weeks.

Thirty-two percent of South Shore Region farms engaged paid labour in 1980 compared to 30 percent in 1970. In the rest of Nova Scotia 46 percent of the farms reported paid

labour in 1980, up from 40 percent in 1970. South Shore Region farms with paid labour had an average of 58 weeks in 1980, a 94 percent increase from 1970. The average for farms with paid labour in the rest of the province was 71 weeks in 1980, a 36 percent increase in the ten years. In summary a smaller proportion of South Shore Region farmers, than farmers in the rest of the province, engage paid labour and they use substantially less paid labour.

Farm capital was examined in terms of the value of all capital, value of land and buildings, value of machinery and equipment, and the value of livestock and poultry (Table 4). Average capital value per farm in the South Shore Region in 1981 was $115,600 compared to $190,500 in the rest of the province. The combined influence of inflation and farm expansion increased average capital value per farm approximately five-fold in both parts of the province. Average farm value of land and buildings increased faster in the South Shore Region than in the rest of the province between 1971 and 1981. In contrast average machinery and equipment and livestock and poultry values increased faster in the rest of the province.

The average per farm distribution of capital between the three major classes was as follows:

	South Shore Region		Rest of Nova Scotia	
Type of Capital	1971	1981	1971	1981
Land and Buildings	64%	73%	64%	70%
Machinery and Equipment	19%	16%	19%	17%
Livestock and Poultry	23%	11%	16%	13%

TABLE 4: South Shore Region and rest of Nova Scotia: Capital on farms

	SOUTH SHORE REGION			REST OF NOVA SCOTIA		
	1971	1981	1981 as % of 1971	1971	1981	1981 as % of 1971
Value of Capital on Farms						
Total ($000)	24,783	98,659	398	181,302	798,904	441
Average per Farm ($)	23,097	115,661	501	36,738	190,578	519
Value of Land & Buildings						
Total ($000)	15,806	72,372	458	116,427	560,752	482
Average per Farm ($)	14,730	84,844	576	23,592	133,767	567
Value of Machinery & Equipment						
Total ($000)	4,672	15,596	334	35,196	134,692	383
Average per Farm ($)	4,355	18,284	420	7,132	32,131	451
Value of Livestock & Poultry						
Total ($000)	5,660	10,689	189	29,303	103,462	353
Average per Farm ($)	5,275	12,531	238	5,938	24,681	416

Source: Statistics Canada Census of Agriculture

The South Shore Region's relative utilization of capital shifted toward land and buildings in the decade and away from the other two classes. In the rest of the province, there was also a shift toward land and buildings even though it was not as great a shift as in the South Shore Region.

3.2 Farming Activities

Hay production in the South Shore Region accounted for 67 percent of the Region's crop area in 1981 (Table 5). The area allocated to hay increased 19 percent from the 1971 census. Barley, some fodder crops, and potatoes increased also.

In the rest of the province, hay was also the most widely grown field crop (64 percent of the 1981 field crop area). Grain production increased slightly from 1971 to 1981 with substantial increases in rye and grain corn production.

Vegetable production in the South Shore Region rose from 78 hectares in 1971 to 170 hectares in 1981, a 118 percent increase. Cabbage and turnips were the most commonly grown vegetables even though these vegetables decreased over the decade. Vegetable production in the rest of Nova Scotia occupied 2,993 hectares in 1981, a 25 percent increase from 1971. Beans, carrots and green peas accounted for 70 percent of the vegetable area, and carrots tripled in area from 1971 to 1981.

Twenty-eight South Shore farms reported greenhouses in 1981 compared to 16 farms in 1971. Fourteen of these were in

TABLE 5: South Shore Region and rest of Nova Scotia: Field crop and vegetable areas

	SOUTH SHORE REGION			REST OF NOVA SCOTIA		
	1971	1981	1981 as % of 1971	1971	1981	1981 as % of 1971
Area of Major Field Crops (Hectares)						
Wheat	21	6	29	1,947	2,880	148
Oats for Grain	224	202	90	6,978	6,530	94
Barley	24	45	188	3,499	3,440	98
Mixed Grains	20	17	85	3,437	2,155	63
Rye	21	11	52	724	1,835	253
Grain Corn	2	2	100	1,200	2,152	179
Tame Hay	4,881	5,794	119	56,905	65,311	115
Fodder Oats	171	144	84	1,438	1,615	112
Silage/Fodder Corn	44	80	182	3,370	3,046	90
Other Fodder Crops	50	73	146	779	782	100
Potatoes	1	43	8,600	1,412	1,502	106
Area of Major Vegetable Crops (Hectares)						
all Vegetables	78	70	90	2,386	2,893	121
Beans	3	2	67	873	965	111
Beets	2	2	100	17	39	229
Cabbage	19	17	89	106	176	166
Carrots	3	2	67	164	512	312
Cauliflower	4	4	100	17	36	212
Cucumber	2	2	100	40	57	143
Green Peas	4	2	50	675	664	98
Lettuce	3	3	100	45	29	64
Sweet Corn	8	5	63	160	261	163
Tomatoes	1	3	300	48	51	106
Turnip	19	10	53	152	126	83
Other	7	8	114	76	152	200

Source: Statistics Canada Census of Agriculture

Lunenburg County. The greenhouse operations averaged 343 square meters. In 1971 the 16 greenhouse operations in Western Nova Scotia averaged 604 square meters. There were 133 greenhouse operations in the rest of the province in 1981. The average size of these operations was 1,324 square meters, substantially larger than the figure for the South Shore Region.

Fifty-four Nova Scotia operators reported 95 hectares of nursery crops in 1981. This represented twice the number of producers and five times the nursery area reported in the 1971 Census of Agriculture. Western Nova Scotia reported six nursery-stock growers in 1981 compared to four in 1971. The 1981 area was suppressed to maintain individual confidentiality.

Total cattle numbers in the South Shore Region increased seven percent from 1971 to 1981 while cattle numbers in the rest of the province rose 8 percent over the same period (Table 6). Dairy cow numbers fell 36 percent in the Region compared to 10 percent in the rest of the province. The number of replacement heifers rose 13 percent in the Region compared to a 65 percent increase in the rest of the province.

Fifty-five percent of the South Shore Region's dairy cows were in Lunenburg County. Yarmouth County accounted for 40 percent of the Region's dairy cows, and small numbers were in Digby County and Queens County.

The South Shore Region's beef herd totalled 3,066 animals in 1981. This represented a 28 percent increase from 1971 compared to a 10 percent increase in the rest of the

TABLE 6: South Shore Region and rest of Nova Scotia: Livestock and poultry on farm

	SOUTH SHORE REGION			REST OF NOVA SCOTIA		
	1971	1981	1981 as % of 1971	1971	1981	1981 as % of 1971
Total Cattle	12,094	12,893	107	118,016	127,316	108
Dairy Cows	3,425	2,199	64	37,783	34,038	90
Replacement Dairy Heifers	717	810	113	10,218	16,863	165
Beef Cows	2,402	3,066	128	19,162	21,006	110
Replacement Beef Heifers[1]	1,215	1,019	84	8,377	7,109	85
Cattle on Feed	1,048	1,510	144	10,404	11,108	107
Total Pigs	8,507	22,016	259	71,258	117,328	165
Sows 6 mos. and over for breeding	1,085	2,619	241	6,992	11,666	167
Total Sheep	2,703	3,037	112	33,134	39,949	121
Total Chickens	355.6	314,300	88	2,700.2	3,120,800	116
Layers less than 5 months	88.6	N/A		1,118.5	N/A	
Layers Replacements less than 5 months	91.0	N/A		500.5	N/A	
Total Turkeys	22,507	N/A		47,861	N/A	
Total Geese	220	286	130	2,192	1,709	78
Total Ducks	280	701	250	1,546	2,917	189
Total Mink	101,797	N/A		28,562	N/A	
Total Rabbits	254	1,945	766	1,684	6,535	388

Source: Statistics Canada Census of Agriculture

[1] Includes some heifers for slaugher in 1971.

province. The numbers of replacement beef heifers declined 16 percent in the Region compared to 15 percent in the rest of the province. In both areas, the ratio of beef replacements to cows was one to three. There were 51 replacement beef heifers per 100 cows in the Region in 1971, and 44 per 100 cows in the rest of the province. It would appear that industry optimism has declined in both areas.

Pork production expanded considerably in the South Shore Region (a 159 percent increase in pig numbers from 1971 to 1981). In the rest of the province production increased 65 percent over the same period. Sows in the Region also increased from 1,085 in 1971 to 2,619 in 1981, an increase of 141 percent. In the rest of the province sow numbers rose 67 percent over the same period.

Sheep flocks in the South Shore Region totalled 3,037 animals in 1981 a 12 percent increase from 1971. There were 39,949 sheep in the rest of the province, an increase of 21 percent over the same period.

Total chicken numbers declined by 12 percent in the South Shore Region from 1971 to 1981 while in the rest of the province the chicken flock expanded by 16 percent. The 1981 data for the number of layers in the Region were suppressed for confidentiality.

The South Shore Region of the province produced negligible numbers of geese. The production of ducks was a minor item while mink and turkeys were major items.

The trend for utilization of tractors and selected machinery was established (Table 7). Tractor numbers increased

TABLE 7: South Shore Region and rest of Nova Scotia: Farm mechanization

	SOUTH SHORE REGION			REST OF NOVA SCOTIA		
	1971	1981	1981 as % of 1971	1971	1981	1981 as % of 1971
Tractors [1]	750	853	114	5,785	6,760	117
Less than 50 hp	N/A	589	-	N/A	3,874	-
50-99 hp	N/A	216	-	N/A	2,560	-
100 or more hp	N/A	48	-	N/A	326	-
hectare improved land per tractor	16	16	100	25	24	96
tractors per census farms	0.70	1.00	143	1.17	1.61	138
Combines	68	9	13	251	293	117
hectares of grain per combine[2]	5	31	620	71	65	92
Swathers	27	39	144	54	289	535
Balers	413	318	77	1,904	2,286	120
smaller bale (200 lb)	N/A	313	-	N/A	2,202	-
large Bale (200 lb)	N/A	5	-	N/A	84	-
hectares of hay per baler	12	18	150	30	28	93
Forage Harvester	102	29	28	188	388	206

Source: Statistics Canada Census of Agriculture

1 Excludes garden tractors.
2 Includes grain corn.

14 percent in the Region and 17 percent in the rest of Nova Scotia. Despite increases in farm scale in both parts of the province, the ratio of improved land to tractors was unchanged in the South Shore Region while it declined slightly (4 percent) in the rest of Nova Scotia from 1971 to 1981. There were 16 hectares of improved land per tractor in the Region compared to 25 hectares of improved land per tractor in the rest of the province in 1981.

The distribution of tractors by size in 1981 was as follows:

Size of Tractor	South Shore Region	Rest of Nova Scotia
Less than 50 hp.	69%	57%
50 - 99 hp.	25%	38%
100 or more hp.	6%	5%

Combine numbers declined 87 percent in the Region from 1971 to 1981 but the hectares of grain per combine increased 520 percent. In the rest of Nova Scotia the number of combines increased (17 percent) while the hectares of grain per combine decreased 8 percent over the same period. Numbers of swathers increased 44 percent in the Region compared to 435 percent in the rest of the province. The number of forage harvesters used in the South Shore area declined sharply (72 percent) compared to a sharp rise (106 percent)

in the rest of the province. Baler numbers decreased 23 percent in the Region while increasing 20% in the rest of Nova Scotia. "Big-bale" machines accounted for 2 percent of the Region's baler total compared to 4 percent in the rest of the province.

3.3 Farm Output

Statistics Canada categorizes census farms in terms of the major source(s) of farm revenue. This "product type" classification is determined by the commodity or group of commodities which accounted for 51 percent or more of total potential sales from the farm. Farms with sales of $2,500 or more were classified according to product type. Mixed farms are classified according to whether livestock, field crops, or some other enterprise predominates. The "miscellaneous specialty" grouping includes greenhouses, nurseries, mushroom houses, sheep, horses, apiaries, fur farms and goats.

In both areas of the province, the number of farms with sales of $2,500 or more increased 23 percent from 1971 to 1981 (Table 8). In the Region dairy farms made up 33 percent of the farms in 1971 but decreased to 16 percent in 1981. The number of dairy farms with sales of $2,500 or more declined by 57 percent. In the rest of the province dairy farms made up 41 percent of all farms with sales over $2,500 in 1971, and their share declined to 29 percent by 1981.

Changes in the farm classification system made it impossible to derive accurate comparisons for cattle and hog farms

TABLE 8: South Shore Region and Rest of Nova Scotia: Farms with sales of $2,500 or more by product type

Census Farms with Sales of $2,500 or More	SOUTH SHORE REGION			REST OF NOVA SCOTIA		
	1971	1981	1981 as % of 1971	1971	1981	1981 as % of 1971
Total	330	407	123	2,238	2,762	123
Dairy	110	63	57	909	767	84
Cattle[1]	77	157	204	578	789	137
Hogs		29			167	
Poultry	27	17	63	142	109	77
Wheat	-	-	-	-	11	
Small Grains[2]	-	2		9	45	500
Field Crops[3]	2	9	450	76	65	86
Fruit and Vegetables	16	24	150	234	425	182
Misc. Specialty	48	84	175	61	238	390
Mixed	13	22	169	154	146	95
Livestock Comb.	9	11	122	68	81	119
Field Crop Comb.	-	-	-	8	9	113
Other Comb.	4	11	275	78	56	72
Forestry	37			77		

SOURCE: Statistics Canada Census of Agriculture

1 Includes cattle, hogs and sheep for 1971
2 Excludes Wheat farms
3 Excludes small grains farms

during the 1971 - 1981 period. The 1971 figures for cattle farms included sheep and hog farms. Cattle farms, however, were the predominant farms in the South Shore Region in 1981, making up 39 percent of the total, a definite increase from 1971. Cattle farms doubled in number during the ten years.

Miscellaneous specialty farms were in third place in the South Shore Region in 1981 and hog farms were in fourth place. Twenty-four fruit and vegetable farms existed in 1981.

The distribution of Nova Scotia farms according to volume of annual sales was examined for 1971 and 1981 despite the problems of interpretation created by inflation. The number of farms with very small sales (less than $2,500) dropped 39 percent in the Region during the decade, as compared to 47 percent in the rest of Nova Scotia. There was a substantial increase (296%) in the number of Region farms with large sales ($50,000 and more), an increase fairly close to the 327 percent increase in the rest of the province (Table 9).

TABLE 9: South Shore Region and rest of Nova Scotia: Farms by sales class

	SOUTH SHORE REGION			REST OF NOVA SCOTIA		
	1971	1981	1981 as % of 1971	1971	1981	1981 as % of 1971
No. of Farms by Sales Class						
$250,000 and over		23			140	
$100,000 - $249,999		27			325	
$50,000 - $99,999	23[1]	41		190	347	427
$25,000 - $49,999	24	42	175	259	300	116
$10,000 - $24,999	80	65	81	624	536	86
$5,000 - $9,999	85	90	106	536	544	101
$2,500 - $4,999	118	119	101	629	570	91
Less than $2,500	736	446	61	2,684	1,430	53
Institutional	7			13		

SOURCE: Statistics Canada Census of Agriculture

1 Farms with sales of $50,000 or more in 1971.

4.0 OPPORTUNITIES AND CONSTRAINTS RELEVANT TO AGRICULTURAL DEVELOPMENT IN THE REGION

4.1 Introduction

Regional development in agriculture is usually seen in terms of an opportunity to expand production of a commodity already produced in the Region, or to begin to produce a commodity not previously associated with the Region. Often, however, development may be seen as development of a new technology, or the application of existing technology (e.g. farm drainage), and these changes may affect the production of more than one commodity. The focus in this report will be on commodity opportunities, although technology aspects will be noted.

Opportunities are sometimes viewed in terms of dramatic breakthroughs. These breakthrough opportunities are few in an established agricultural system. Therefore, an opportunity sometimes should be seen as retaining a market, or living with a slowly expanding market, for a product that is important in the Region. Supply management products, for example, may be important to a Region in terms of a contribution to the Region and to individuals producing those products. Retention of the right to produce, despite no growth or slow growth, may be regarded as an important contribution and the retention of these products at as high a level as possible may be regarded as a development opportunity - as a decrease may lead to frenetic efforts to develop less promising products. Due note will be taken, therefore, of the place of established commodities in the Region.

Commodity information in this report was examined for the following commodity groups:

1. National supply management commodities - dairy, chickens, eggs, turkeys.
2. Non supply management livestock commodities - beef, hogs, sheep.
3. Field crops.
4. Fruits.
5. Vegetables.
6. Other commodities.

Constraints to agricultural development were examined in terms of the resource base of soil and climate, the resources of labour and capital that were applied to the resource base, and the marketing system.

Nova Scotia agriculture operates under an overriding constraint which requires stating lest an examination of regional agriculture lead to an emphasis on the overriding constraint, and overlook opportunities that will exist in the Regions. The overriding constraint is locational in nature, as Nova Scotia producers are a long way from large consumer markets, and transportation costs make it difficult for producers to be competitive in those markets. The locational constraint is reinforced by another constraint - a soil and climate constraint that limits the range of products that can be produced in volume. The result is a provincial agricultural economy that:

a. Can not supply (on a net basis) the food requirements of Nova Scotia's population.

b. Can export from the province substantial amounts of some agricultural products - exports that partially offset large imports of grain and tropical food products.

c. Relies on the domestic market of Nova Scotia for long-term growth.

The reliance on the provincial market can be illustrated by a tendency for the trend lines for population growth and agricultural production to run fairly close together (Fig.1). In some periods agricultural production tended to remain below the population line, at other times it was above. The agricultural production line trended upward more steeply than usual after 1976, probably as a result of a more profitable agriculture in the late 1970's, some government incentive, and a lower value Canadian dollar in recent years.

The South Shore Region's agricultural output is not a large part of Nova Scotia's agriculture. The Region's production, as measured by agricultural sales, was 9.7 percent of the Province's production in 1980, marginally down from the 10.0 percent of 1970. Within the Region the output of Digby County increased from 2.7 percent of Nova Scotia's production in 1970 to 4.5 percent in 1980. Lunenburg County decreased from 4.9 to 3.5 percent during the decade. A reduction also occurred in Yarmouth and Shelburne while Queens remained constant.

The decade of the 1970's was a period of growth in Nova Scotia agriculture, although most of the growth was achieved in the second half of the period. Variations

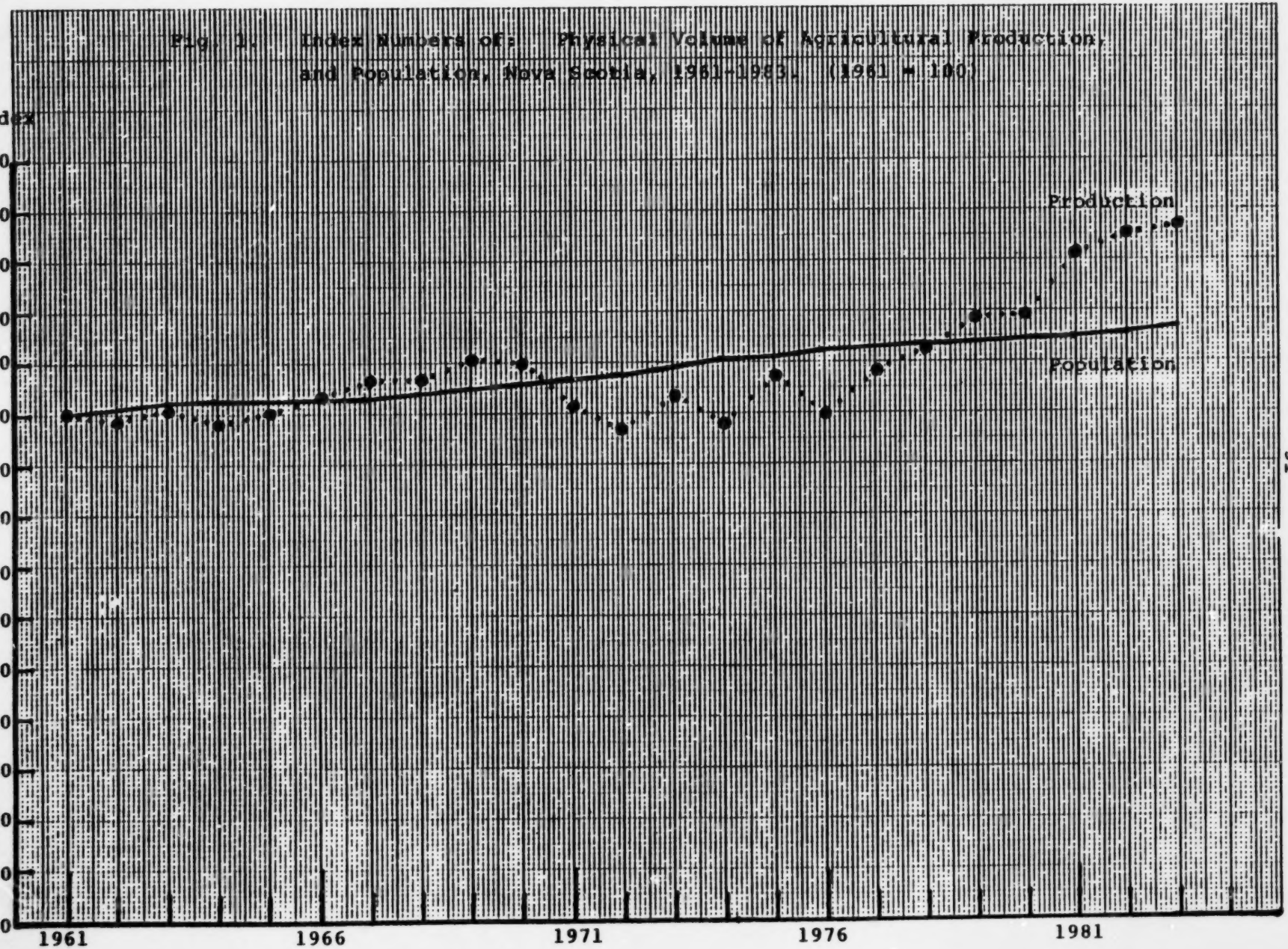


Fig. 1. Index Numbers of: Physical Volume of Agricultural Production, and Population, Nova Scotia, 1961-1983. (1961 = 100)

Source: Statistics Canada

in physical output from year to year made it difficult to measure increases, but the percentage increase in physical production was 8.4 from 1970 to 1980, and 17.7 from 1971 to 1981.

Physical output data were not available on a regional basis, but agricultural sales may be used as a rough measure of growth, when such sales for 1970 and 1980 were expressed in constant 1980 dollars.

Provincial growth in sales from 1970 to 1980 was 38 percent. Sales growth in Digby County was 134 percent in the 1970 to 1980 decade, the largest county increase in the province on a percentage basis. Sales growth in Queens County was a respectable 29 percent, while the other three counties recorded decreases.

The South Shore Region's growth was a low 13.5 percent and the Region accounted only for 8.9 percent of the growth in Nova Scotia's agricultural sales from 1970 to 1980.

4.2 National Supply Management Commodities

Commodities produced under the national supply management system generally provide producers with relatively good income compared to incomes available from producing many other products. Growth in the market tends to be slow, and subject to market trends and policy decisions arising from federal-provincial-producer agreements. The importance of the supply management products, however, in total agricultural output gives a real incentive to any Region to retain this production within the Region.

Dairy: Although dairy cow numbers in Nova Scotia and the South Shore Region have decreased, increased milk production per cow has increased total milk output. Production efficiency was high in the dairy industry, as output per cow increased at a 2.5 percent annual rate, well above the Canadian average. Fluid sales have increased steadily to supply the Province's requirements and some out-of-Province fluid sales. Milk for the manufacturing market has increased at about the same rate in the last two decades and supplies a portion of the manufacturing milk market of the Province.

The South Shore Region may have a smaller share of the milk market in recent years, if cow numbers can be used as a measure. Dairy cow numbers in the Region in 1971 represented 8.3 percent of cows in the Province and this decreased to 6.1 percent in 1981.

Constraints on the industry's further growth include those arising from the supply management system whereby the Province entered a national system and obtained advantages of industry stability, and income growth for producers, but had to give up a possibility of increased market share. This constraint results in cost problems in the milk manufacturing area, as Nova Scotia's only cheese plant operated at only 45 percent of capacity when the Province was within the Market Supply Quota.

A milk marketing review committee identified other problems of communication and organization in the industry. These problems included a recognition that demand for milk may decline, inconsistencies in the way dairies deal with milk

shipments to Newfoundland, and differences in payments made to producers by the six dairies.

Hotels, restaurants and institutions purchased only 15 to 25 percent of their processed dairy products (cheese, yogurt, etc.) from Nova Scotia sources. Opportunities existed for increasing the market share but the constraint was the supply of milk awarded to Nova Scotia as its share of national quota.

Nova Scotia might have an opportunity to produce ultra high temperature products as the province has the only ultra high temperature plant in the Atlantic Provinces. The constraint is that negotiations are necessary with other provincial milk boards as ultra high temperature milk is in the same category as fresh milk.

Further constraints at the marketing level include:

a. Low per capita sales of cottage cheese and yogurt in markets in the Atlantic Provinces that are supplied from Nova Scotia.

b. Some feeling that many consumers may have a negative attitude to milk based on leak prone packages, high spoilage, inferior taste, and too many additives.

Poultry: Production of poultry meats is one of the most efficient segments of the provincial agriculture industry. Poultry meats,surplus to Nova Scotia's requirements,are exported to P.E.I., Newfoundland and other parts of North America. Production in the early 1980's was about 50 percent higher than in 1971.

Provincial egg producers, historically, supplied both local and export demands, but the production level in the early 1980's was about the same as in the early 1970's.

Data are inadequate to determine exactly the position of the South Shore Region in the poultry industry. In 1971 the Region had 8.8 percent of the Province's chickens, but the Region's position in the industry declined to 7.6 percent by 1981. Producers in Lunenburg and Yarmouth Counties have 7 percent of the total Nova Scotia egg quota. Producers in Lunenburg hold 10 percent of the chicken quota and approximately 12 percent of the broiler turkey quota.

The centralization of much of the poultry industry, the factory type character of the enterprises, and the supply management aspect, allow the industry to serve Nova Scotia in an organized way. Excess production can be shipped to other provinces in the Atlantic area. As poultry production occurs usually near the region in which it is marketed, little opportunity exists for further export growth.

Constraints include a vulnerability to changes in production costs, especially energy and feed,and an inability to fully service the demands for poultry products by Nova Scotia consumers. Hotels, restaurants and institutions probably obtain 90 percent of their eggs within the province, 80 to 90 percent of their chicken and only 25 to 30 percent of their turkey requirements. The size of Nova Scotia's quota allotment for chickens and turkeys is an overriding constraint on meaningful enlargement of the market.

4.3 Non-Supply Management Livestock and Livestock Products

Beef: Nova Scotia imports large amounts of beef as the province produces only about 25 percent of its requirements. Nova Scotia's beef industry has made modest progress in recent years in the face of strong competition from other areas, areas that could market a high value product in Nova Scotia despite high transportation costs. Generally beef production is a part-time or secondary farm venture, but there has been an increase in the number of larger specialized operations.

The South Shore Region had 11.1 percent of the Province's beef cows in 1971 and its share increased to 12.7 percent in 1981 as beef cow numbers increased from 2,402 to 3,066 in the decade. Almost half of the Region's beef cows were in Lunenburg County.

Many producers in Nova Scotia regard beef production as an opportunity,in spite of a long period of relatively low returns. Part-time farmers, and producers using beef as a secondary enterprise, use cattle to employ resources that would otherwise have been unused. In addition there is a large potential market as the Province produces only a small percent of its high quality beef requirements and only half of its boned beef needs. Hotels, restaurants and institutions purchase less than 25 percent of their volume from Nova Scotia sources. Feeder calves shipped from the province for finishing offer an opportunity for finishing within Nova Scotia. Nova Scotia has available suitable land and a favourable climate for pasture and hay production. Increased production in the province should not affect price levels.

Constraints hindering any rapid expansion of beef production in the South Shore Region include:

a. A period of low prices has led to pessimism in the industry.

b. Other areas, both national and international, have a competitive advantage in beef production in the form of cheaper costs and a structure for quality inspection and marketing.

c. Beef producers may not be able to rely on land prices being low enough to provide profitable operations - since the beef sector is most sensitive to land prices.

d. The dispersed and low-scale nature of the industry hinders extension and educational efforts to improve the industry.

e. The marketing structure is not oriented to readily accepting or handling Nova Scotia beef. Restaurants use large amounts of preportioned and frozen beef and the two preportioners purchase only federally inspected products and use a considerable quantity from outside the province. Present federal inspection facilities might be inadequate to handle significant additional quantities of Nova Scotia beef, although there are differences of opinion on that matter. Processing plants would have to meet federal inspection standards to compete with out-of-province products in retail stores.

f. Consumers no longer regard beef as highly as they did ten years ago in terms of nutrition and value for money - therefore significant gains in consumption are doubtful.

Pork: Nova Scotia's pig numbers increased greatly from 1971 to 1981, and a very large growth in the South Shore Region increased its share of the provincial total from 11 to 16 percent. In 1981 Digby County had 68 percent of the Region's pig population.

Relatively low prices have put pressure on the industry in recent years. Nova Scotia leads all other provinces in the quality of hogs processed. The province is 100 percent self-sufficient in meeting fresh pork requirements and probably is over 60 percent self-sufficient in meeting all pork consumption requirements. An opportunity exists to raise this percentage as local pork is preferred in the provincial marketplace - this preference arising from a quality product, and a freshness of product because of the local production.

Growth was high enough in the Nova Scotia hog industry by 1982-83 to require the shipment of over 50,000 hogs to New Brunswick packers as local facilities could not handle them.

Constraints to expanded production include:

a. Feed costs are high relative to costs in Ontario and Quebec.

b. Large capital construction costs are involved in expanding existing units or establishing new production units.

c. The rapid changes in the hog industry brought about by technological advances requires an emphasis on technology transfer to keep industry people up-to-date.

d. Swine operations increasingly require the services of trained managers and swine farm herdsmen.

e. Losses still occur from bruising and stress as animals move through the marketing system.

f. Low price and profit levels in recent years have imposed the largest constraint on the opportunity for expansion. The price structure for the whole red meats industry induces great uncertainty at the farm level.

g. Processing facilities are not adequate.

Sheep: Sheep numbers in the South Shore Region represented 7.1 percent of the provincial total in 1981, down from the 7.5 percent of 1971. In 1981 Lunenburg County had 30 percent of the Region's total and Yarmouth 23 percent.

Sheep numbers increased in the Region during the 1970's and stabilized in the early 1980's. Sheep production is underdeveloped and small in scale, with many small operations and few specialized operations, although larger units are increasing in number. Few, if any, full-time farmers are totally dependent on sheep in the Region.

In addition to the structural constraints, other constraints include:

a. Any expansion involves sizable expenditures for handling facilities and fencing.

b. Low prices of the 1980-83 period have precipitated cutbacks in Nova Scotia, Canada, and the United States.

c. The marketing system has disadvantages associated with slaughtering facilities and uneven movement to market.

d. Suppliers have difficulty dealing with large retail organizations because of the small and inconsistent supplies.

e. The availability of competitive supplies from other sources, including Oceania, imposes a severe restraint on expansion. Consumers accept imported frozen products.

4.4 Field Crops

The South Shore Region contained only 0.3 percent of the Province's wheat, rye and grain corn area in 1981, and 1.1 percent in 1971. These crops were concentrated in Digby and Lunenburg. The traditional fodder crops increased during the decade from 6.6 percent to 7.1 percent.

Higher freight rates and uncertainty as to long-term plans for feed freight assistance have created an opportunity for the large scale development of a cereal grain industry that will reduce dependence on western grains. Livestock producers will be encouraged to grow more of their own grain requirements and cash sales should increase. The necessary resources of land, labour and capital could be utilized for replacement of imported grain on a large scale. Important elements of a successful replacement program would include early seeding, improved drainage, quality seed, adequate and timely fertilization, disease and pest control, careful harvesting, proper storage and marketing facilities. Temperature, heat units, and the frost free period in Nova Scotia are generally favourable for cereal production. Class 2 and Class 3 soils are suitable for cereal production and large areas of these classes have never been cleared, or have reverted back to forest. One key to profitable grain production in Nova Scotia is the ability to obtain consistently high yields, and several constraints impede the attainment of that objective.

Constraints to large scale replacement of western grains include:

a. Soil constraints include low natural fertility and low pH (acid soils), excessive stoniness, poor soil structure, excess water, adverse topography, and soil degradation. High rainfall leads to drainage, plant disease and trafficability problems.

b. Sophisticated management will be required to deal with the soil constraints, and this requires a high level of technology transfer.

c. On-farm facilities for drying, storing and milling will be required.

d. A lack of skilled farm labour is an important deterrent to increased production, as specialized labour is required for farm operations based on machinery and chemical utilization.

e. Often areas where cereals could be grown are small and isolated.

f. Land tenure patters indicate that many land holdings are small or unavailable for grain production.

g. There is uncertainty as to government transportation policy.

4.5 Fruits

The tree fruit sector of Nova Scotia's agriculture has concentrated in the Valley Region. In 1981, the Valley Region had 97 percent of the total tree fruit area in Nova Scotia and 98 percent of the apples. The South Shore Region had one percent of Nova Scotia's tree fruits area in 1981. Apples accounted for most of this, and the 33 hectares of apples in Lunenburg represented the only concentration of tree fruits in the Region.

The South Shore Region had almost eight times as many small fruit hectares as tree fruit hectares. The small fruits area increased from 347 hectares in 1971 to 396 hectares in 1981. Strawberries were concentrated in Digby, Lunenburg and Yarmouth Counties. This crop decreased in area from 58 to 46 hectares while other small fruits increased from 289 to 350 hectares.

Highbush blueberries continued to develop in Digby County in the 1980's and Lunenburg has some cranberries and raspberries.

The production of strawberries for the fresh market may have reached a saturation point and any further plantings will be geared mainly to population growth - unless processing offers a further opportunity.

Opportunities exist for further expansion of highbush and lowbush blueberries, cranberries, and raspberries.

Nova Scotia raspberry production has expanded moderately since 1971 while cranberry and highbush blueberry production expanded at a very high rate. Cranberries and blueberries have good opportunities in Atlantic area markets and blueberries can be exported to New England. The climate is suitable for both berries, and generally the technology is available.

Constraints on the expansion of cranberries and highbush blueberries in the South Shore Region include:

a. The Region's agricultural resources base limits expansion.

b. Capital establishment costs are high and there is a five year period between planting and harvest.

c. Production is inadequate and as a result certain expenses per unit are high. For example, partly filled trucks of blueberries shipped to U.S. markets incur large per unit transport costs. Increasing production could alleviate this characteristic of any new enterprise. The lack of late-ripening cultivars has limited the ability of many growers of blueberries to participate in the Boston market.

d. These crops require specialized care and equipment. For example in blueberries bird depredation, irrigation requirements, disease control, on-farm cooling, all impose constraints.

Constraints imposing limits on the increased production of strawberries in the South Shore Region include:

a. The Region's agricultural resource base limits expansion.

b. There is a need to develop and introduce a mechanical harvester for strawberries so that expansion can occur in the processing part of the industry and make Nova Scotia competitive with imported products from Poland, Mexico and the United States. A combination of the solid bed culture and mechanical harvester offers some opportunity of overcoming the competitive advantages of other producing areas. Nova Scotia producers have not been interested in the prices paid for processing berries, but a reduction in harvesting costs could make this market more attractive.

c. Other production constraints for strawberries include:

- continuing problems in combatting disease in strawberry plantings,
- the need for a mechanical raised bed shaper,
- the high cost of irrigation equipment constrains the purchase of this equipment,
- the lack of new cultivars to extend the strawberry season.

d. There may be problems at the processing level, including a need for additional facilities, including re-designed or overhauled strawberry de-hullers. Also energy costs will be high in plants with expensive cold storage facilities.

Constraints generally applicable to any of the small fruits include:

a. Competing sources provide hotels, restaurants and institutions with most of their fresh fruit salad and these supplies can only be displaced by Nova Scotia produce through a co-ordinated effort.

b. Hotels, restaurants and institutions purchased only 15 to 30 percent of their in-season supplies of fresh fruit and vegetables from Nova Scotia sources, and this proportion dropped to less than 10 percent for out-of-season purchases. Processed purchases from Nova Scotia sources were higher, 60 to 70 percent of the total.

c. The present marketing system for small fruits is difficult to co-ordinate and opportunities are missed to provide customers with a continuous supply of a quality product.

4.6 Vegetables

Seventy-six percent of the vegetable sector of Nova Scotia's agriculture is concentrated in the Valley Region, and the remainder is dispersed fairly widely across the other regions. The small area of vegetables in the South Shore Region was utilized for several vegetables, and significant plantings of cabbage and turnips were made. Within the Region Lunenburg County had 57 percent of the vegetables in 1981.

The vegetable area in the Region was only 16 percent of the fruit area, but a larger range of commodities were produced. Most of the vegetables remained constant in area during the 1971-81 period.

A few vegetables are produced for fresh and processing markets and slightly more for storage. A larger number are fresh truck vegetables. There appear to be development opportunities in all three groups, although these are difficult to identify because of the large number of vegetables involved. Development opportunities have been identified for fresh vegetable sales to retail and wholesale operations in Nova Scotia if specified quantity, quality and price conditions can be met.

Constraints to increased production include:

a. At the production level major expenditures are required to obtain well drained land, and irrigation systems to protect against frost and to provide water in mid summer. Specialized machinery is needed to increase efficiency and reduce the requirements for seasonal labour.

b. Cooling facilities are necessary for some vegetables to retain quality, and not enough of these facilities are available.

c. Grading, washing and packaging is on an individual basis, making it difficult to obtain quality and volume.

d. Nova Scotia producers can not usually meet the requirements of the few large buyers for large volumes of quality produce over an extended time period.

e. The major constraint remains that imposed by competition from imported produce.

4.7 Other Commodities

The greenhouse industry in Nova Scotia produces cut flowers, potted plants, bedding plants, and greenhouse vegetables. Fairly similar amounts of space are devoted to each product. The area peaked in 1973 and declined as energy costs increased. The South Shore Region probably has about 4 percent of the greenhouse area. Constraints of high energy costs, competition with vegetable imports, and high capital costs for new technology restrict any opportunity for real expansion. About two-thirds of the greenhouse area has been converted to wood fuel for heating.

The nursery business expanded rapidly in the 1960's and 1970's and there is room for further expansion as this industry, in the consumer's mind, is associated with the quality of life.

Historically the apiculture industry has been centred in the Valley Region as climate, bee pasture, and closeness to the orchard industry offered encouragement. All Regions, however, have some beekeepers. The industry expanded as both commercial and hobby producers increased in numbers. Honey production is insufficient to meet provincial demand, but some preference for the local product offers an opportunity for expansion. As orchards and small fruits expand in area the apiculture industry will also expand. Constraints include the lack of bee pasture, bear depredation, diseases, parasites, need for specialized equipment, and a lack of co-ordination in honey marketing.

Fur farming (mink, fox, chinchilla and rabbit production) has expanded rapidly since 1971. Milk pelts more than doubled to 220,000 pelts in 1982, and fox pelts increased to almost 5,000 in 1982. Mink sales accounted for Digby County having the highest rate of growth (134 percent) of any Nova Scotia county between 1970 and 1980. By 1981 Yarmouth, Digby and Shelburne counties had 81 percent of the province's milk, an increase from the 76 percent of 1971. The success of Nova Scotia in differentiating its output through a specific mink breed (blacks) has enabled it to compete successfully on world markets. Production expertise and cheap fish offal for feed have enabled Digby County producers to be efficient producers.

Fox farming expanded as markets grew and local producers emphasized quality pelts. Chinchilla farming remains small. Rabbit farming is constrained by the limited ethnic markets of Halifax and Montreal and lack of slaughtering facilities.

Opportunities for mink expansion are greater than for otner fur farming enterprises. An ideal climate reinforces other elements of the production system. Constraints to a continued high expansion level include:

a. Prices fluctuate widely on international markets.

b. Production constraints include eventual competition with the pet food industry for protein, pollution by-laws regarding manure disposal will require waste disposal systems, and high capital requirements.

c. Research efforts lag behind competitors.

d. Anti-fur campaigns are having an impact on sales in Europe.

e. Exchange rates make Canadian skins more expensive in Europe than competitors furs.

4.8 Other Contraints

The South Shore Region has been described in terms of commodity opportunities and constraints on the further expansion of various commodities. There are general constraints which apply to most commodities and which have not been consistently mentioned thus far.

These constraints include:

a. There may be a lack of research on varieties, production techniques, marketing structure, market opportunities, and use of the land, labour and capital resources.

b. There may be an inadequate system for technology transfer.

c. There may be a lack of service organizations, either business or government, to provide input services or marketing services.

The Region appears to be fairly well serviced by firms providing inputs to the farm production process. The answer is not as clear for marketing services as the scale of firm necessary for some functions (e.g. slaughtering and processing plants) will lead to a situation of inadequate service from the point of view of many individual producers.

4.9 Summary

The South Shore Region has 7.8 percent of Nova Scotia's improved arable land and 9.7 percent of agricultural sales. Three of the Region's major activities, poultry products, hog production, and fur farming, are not based on land but on purchased feed and fish offal.

Growth in sales of agricultural products was only 13.5 percent during the 1970's, far behind the growth rate of the Northumberland (51%) and Valley (40%) Regions. The growth in the South Shore Region was fairly close to the 12.8 percent rate of the Halifax Region.

Fur farming, hog production and small fruits remain the most promising enterprises for expansion. Small fruit production is constrained by the resource base, but the intensive nature of the berry crops does leave some room for expansion. Fur farming and hog production may be constrained by feed costs and marketing problems. Nova Scotia and the Northumberland Region, however, do have a good reputation for relatively efficient production of hogs and furs.

Constraints are present for all commodities, and at all stages of the production and marketing system. Some of the most noticeable constraints are at the marketing level, as there is difficulty matching many farm production and marketing units with the needs of large buying organizations.

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5.2 Persons Contacted - (Alphabetical)

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5.3 Regional Census Data By County

TABLE A1: Distribution and disposition of arable land, by county, in South Shore Region of Nova Scotia

	Digby	Lunenburg	Queens	Shelburne	Yarmouth
Amount of:					
1971 Improved Arable Land (ha)	2,225	6,090	596	405	2,874
Residual Arable Land (ha)	66,173	29,014	5,739	3,142	53,500
Total Arable Land (ha)	68,398	35,104	6,335	3,547	56,374
Improved Land as Proportion of Total Arable Land (%)					
1971	3.3	17.3	9.4	11.4	5.1
1981	4.8	18.2	21.4	4.2	4.8
Proportion of County's Arable Land Classed as:					
Class 2 (%)	2	-	-	-	-
Class 3 (%)	68	98	97	75	62
Class 4 (%)	30	2	3	25	38
	100	100	100	100	100
County's Proportion of Regions:					
1971 Improved Arable Land (%)	18.2	50.0	4.9	3.3	23.6
Residual Arable Land (%)	42.0	18.4	3.6	2.0	34.0
Total Arable Land (%)	40.3	20.7	3.7	2.1	33.2

Source: Derived from Arbour, J.H., Residual Arable Land in The Maritime Provinces Lands Directorate, Environment Canada, 1981.

TABLE A2: Farm Numbers and Land Utilization by County in South Shore Region of Nova Scotia

	Digby		Lunenburg		Queens		Shelburne		Yarmouth	
	1971	1981	1971	1981	1971	1981	1971	1981	1971	1981
Total No. of Farms	216	203	554	406	60	65	48	36	195	143
Total Area of Farms (000 ha.)	15.8	12.9	40.2	27.0	6.1	7.7	3.9	1.6	11.9	7.5
No. of Farms by Land Area										
53 ha.	120	124	270	213	29	30	34	38	137	95
53-96 ha.	40	31	159	98	11	8	3	2	31	27
97-161 ha.	29	27	71	65	5	11	3	3	15	12
162-226 ha.	15	14	31	17	6	6	4	2	4	5
226 ha.	12	7	23	13	9	10	4	1	8	4
No. of Farms by Improved Land Area										
4 ha.	92	60	184	98	23	17	33	24	76	43
4-27 ha.	105	110	327	243	33	38	12	11	95	69
28-52 ha.	10	21	26	43	2	7	1	1	17	19
53-72 ha.	6	4	10	13	2	1	-	-	2	4
13-96 ha.	1	4	4	-	1		-	-	2	3
27-161 ha.	2	2	3	3	-	1	2	-	2	4
161 ha.	-	1	1	-	-	1	-	-	1	1
Use of Farmland (ha.)										
Improved	2,237	3,304	6,094	6,380	596	1,355	404	149	2,876	2,718
Crop	928	1,083	3,256	3,794	293	765	75	75	1,440	1,277
Pasture	761	1,014	1,739	1,835	193	215	60	49	1,169	985
Summer Fallow	100	82	66	105	19	191	-	-	35	16
Other	448	1,125	1,034	645	91	185	270	24	232	440
Unimproved	13,607	9,646	34,093	20,655	5,465	6,358	3,547	1,430	9,031	4,819
Woodland	11,019	7,706	27,238	16,882	4,570	5,602	2,691	792	5,766	3,718
Other	2,588	1,939	6,855	3,773	894	756	856	638	3,264	1,101

SOURCE: Statistics Canada Census of Agriculture

TABLE A3: Farm Labour Characteristics by County in South Shore Region of Nova Scotia

	Digby		Lunenburg		Queens		Shelburne		Yarmouth	
	1971	1981	1971	1981	1971	1981	1971	1981	1971	1981
No. of Farms by Age of Operator										
Under 25 years	5	6	6	10	-	1	1	1	1	1
25-34 Years	24	33	35	52	8	10	4	8	17	31
35-44 Years	43	46	96	83	10	14	14	9	26	31
45-54 Years	61	59	169	106	12	16	19	8	63	28
55-64 Years	59	35	150	100	22	14	10	4	52	26
65 and over	24	24	98	55	8	10	10	6	36	26
Total Days of Off-Farm Work by Farm Operator During Previous Year	16,848	22,167	45,616	41,708	6,025	8,230	6,455	4	18,016	2,024
No. of Farms Reporting	100	112	281	223	30	44	31	1	102	48
Average per Farm Reporting	168	198	209	187	201	187	208	4	177	42
Total Weeks Paid Labor	4,514	9,443	2,613	3,624	232	626	96	2 ,962	2,042	14,223
No. of Farms Reporting	76	77	144	128	20	18	8	13	71	67
Average per Farm Reporting	59	123	18	28	12	35	12	228	29	212

SOURCE: Statistics Canada Census of Agriculture

TABLE A4: Captial on Farms by County in South Shore Region of Nova Scotia

	Digby		Lunenburg		Queens		Shelburne		Yarmouth	
	1971	1981	1971	1981	1971	1981	1971	1981	1971	1981
Value of Capital on Farms										
Total ($000)	5,336	23,362	12,157	48,775	1,312	7,053	820	7,053	5,157	17,521
Average per Farm ($)	34,707	114,519	21,944	120,135	21,867	108,508	17,092	56,889	26,444	122,524
Value of Land & Building										
Total ($000)	3,008	17,330	8,147	35,874	79	5,399	550	1,458	3,308	12,311
Average Per Farm ($)	13,927	85,369	14,706	88,360	13,197	83,062	11,467	40,500	16,964	86,091
Value of Machinery and Equipment										
Total ($000)	885	3,555	2,360	7,610	329	978	116	370	980	3,082
Average Per Farm ($)	4,099	17,512	4,261	18,744	5,497	15,046	2,431	10,378	5,027	21,552
Value of Livestock & Poultry										
Total ($000)	1,442	2,377	2,007	5,290	190	676	152	219	867	2,127
Average Per Farm ($)	6,677	11,709	8,623	13,030	3,170	10,400	3,183	6,083	4,450	14,874

SOURCE: Statistics Canada - Census of Agriculture

TABLE A5: Field Crop and Vegetable Areas, by County, in South Shore Region of Nova Scotia

	Digby		Lunenburg		Queens		Shelburne		Yarmouth	
	1971	1981	1971	1981	1971	1981	1971	1981	1971	1981
Area of Major Field Crop (Hectares)										
Wheat	7	1	6	5	8	-	-	-	-	-
Oats for Grain	31	57	161	117	21	25	-	1	10	2
Barley	19	24	4	18	-	-	-	-	1	2
Mixed Grains	17	2	3	13	-	1	-	-	-	-
Rye	19	-	-	1	-	-	-	-	2	-
Grain Corn	-	-	2	11	-	-	-	-	-	-
Tame Hay	700	890	2,834	3,292	209	452	64	62	1,074	1,098
Fodder Oats	21	26	97	76	9	21	2	3	41	17
Silage/Fodder Corn	-	3	43	51	-	24	-	-	-	2
Other Fodder Crops	7	6	14	34	-	-	-	-	29	32
Potatoes	27	21	4	7	2	7	-	-	14	8
Area of Major Vegetable Crops (ha.)										
All Vegetables	22	7	28	40	4	4	2	1	21	14
Beans	1	-	1	1	-	-	-	-	1	-
Beets	-	-	-	1	-	-	-	-	1	-
Cabbage	3	-	14	14	-	-	-	-	2	2
Carrots	-	-	-	1	-	-	-	-	2	-
Cauliflower	4	-	-	3	-	-	-	-	-	-
Cucumber	-	-	1	1	-	-	-	-	1	-
Green Peas	2	-	-	1	-	-	-	-	1	-
Lettuce	-	-	-	-	-	-	-	-	3	2
Sweet Corn	1	3	5	2	1	-	-	-	1	3
Tomatoes	-	-	-	1	-	-	-	-	-	-
Turnips	6	2	5	3	-	1	1	-	6	-
Other	3	-	1	5	-	-	-	-	2	2

SOURCE: Statistics Canada Census of Agriculture

TABLE A6: LIVESTOCK AND POULTRY ON FARMS, BY COUNTY, IN SOUTH SHORE REGION OF NOVA SCOTIA

	Digby		Lunenburg		Queens		Shelburne		Yarmouth	
	1971	1981	1971	1981	1971	1981	1971	1981	1971	1981
Total Cattle	1,896	2,055	6,573	6,671	729	910	390	261	3,316	2,996
-dairy Cows	283	46	1,824	1,213	98	49	34	10	1,186	881
-replacement dairy heifers	42	NA	394	519	21	8	12	NA	248	272
-beef Cows	478	702	1,106	1,469	205	293	131	87	482	515
-replacement beef heifers[1]	254	222	536	485	86	89	62	47	277	176
-cattle on feed	208	308	683	636	87	170	45	17	254	379
Total Pigs	4,707	14,914	2,942	NA	605	NA	58	NA	195	NA
-sows (6 mo. & over for breeding	499	1,808	444	NA	117	NA	-	NA	25	NA
Total Sheep	358	264	697	1,295	98	-	686	470	864	1,008
Total Chickens	18,400	18,200	324,000	294,400	11,400	667	500	119	1,300	861
Layers more than 5 months	12,900	NA	73,500	49,582	100	NA	300	NA	800	NA
Replacement Layers less than 5 mo.	5,200	NA	85,000	47,844	300	NA	100	NA	400	NA
Total Turkeys	-	NA	22,505	NA	-	NA	-	-	2	NA
Total Geese	49	68	37	167	-	NA	17	NA	117	NA
Total Ducks	51	NA	52	291	-	81	63	NA	114	197
Total Mink	84,707	NA	2,600		-	NA	5,130	NA	9,360	NA
Total Rabbits	20		45				47		140	

SOURCE: Statistics Canada Census of Agriculture

[1] Includes some heifers for slaughter in 1971.

TABLE A7: Farm Mechanization by County in South Shore Region of Nova Scotia

	Digby		Lunenburg		Queens		Shelburne		Yarmouth	
	1971	1981	1971	1981	1971	1981	1971	1981	1971	1981
Tractors [1]	131	182	420	447	43	54	22	18	134	142
Less than 50 hp	NA	131	NA	299	NA	47	NA	11	NA	101
50-99 hp	NA	47	NA	113	NA	14	NA	6	NA	36
100 or more hp	NA	18	NA	35	NA	3	NA	1	NA	5
Hectares improved Land per Tractor	17	4	14	14	14	21	18	8	21	19
Tractor per Census Farm	0.61	0.90	0.76	1.10	0.72	0.98	0.46	0.50	0.69	0.99
Combines	38	4	8	3	-	1	-	-	2	1
Hectares of Grain Per Combine [2]	2	21	22	55	-	26	-	-	6	4
Swathers	6	9	17	21	1	3	-	1	3	5
Balers	26	48	323	185	16	25	5	9	43	51
Small Bale (less than 200 lb.)	NA	48	NA	180	NA	25	NA	9	NA	51
Large Bale (greater than 200 lb.)	NA	-	NA	5	NA	-	NA	-	NA	-
Hectares of Hay per baler	27	18	9	18	13	18	13	7	25	22
Forage Harvesters	39	3	52	14	-	2	-	-	11	10

SOURCE: Statistics Canada Census of Agriculture

[1] Excludes garden tractors.
[2] Includes grain corn.

TABLE A8: Farms With Sales of $2,500 or More by Product Type, by County, in South Shore Region of Nova Scotia

	Digby		Lunenburg		Queens		Shelburne		Yarmouth	
	1971	1981	1971	1981	1971	1981	1971	1981	1971	1981
Census Farms with Sales of $2,500 or more										
-Total	73	116	147	184	17	24	10	13	83	70
-Dairy	8	2	51	34	6	2	-	-	4	25
-Cattle [1]	19	34	37	88	5	14	3	2	13	19
-Hogs		18		10		1		-		-
-Poultry	3	3	22	14	1	-		-	1	-
-Wheat	-	-	-	-	-	-	-	-	-	-
-Small Grains [2]	-	1	-	-	-	1	-	-	-	-
-Field Crops [3]	2	1	-	6	-	2	-	-	-	-
-Fruit & Vegetables	3	3	4	12	-	-	-	2	9	7
-Misc. Specialty	29	50	5	9	-	3	4	8	10	14
-Mixed	2	4	8	11	2	1	-	1	1	5
-Livestock Comb.	1	1	7	7	1	-	-	-	-	3
-Field Crop Comb.	-	-	-	-	-	-	-	-	-	-
-Other Comb.	1	3	1	4	1	1	-	1	1	2
-Forestry	7		20		3		3		4	

SOURCE: Statistics Canada Census of Agriculture

1 Includes cattle, hogs and sheep for 1971
2 Excludes Wheat Farms.
3 Excludes Small Grains Farms.

TABLE A9: Farms by Sales Class, by County, in South Shore Region of Nova Scotia

	Digby		Lunenburg		Queens		Shelburne		Yarmouth	
	1971	1981	1971	1981	1971	1981	1971	1981	1971	1981
No. of Farms by Sales Class										
$250,000 or more		14		6		1		-		2
$100,000-249,999		14		8		-		-		5
$50,000-99,999	9[1]	7	11[1]	24	-	1	-	1	3[1]	8
$25,000-49,999	6	17	12	12	-	1	-	-	6	12
$10,000-24,999	19	17	31	32	6	5	2	3	22	8
$5,000-9,999	18	21	36	41	4	9	3	1	24	18
$2,500-4,999	21	26	57	61	7	7	5	8	28	17
Less than $2,500	142	87	405	222	42	41	37	23	110	73
Institutional Farms	1		2		1		1		2	

SOURCE: Statistics Canada Census of Agriculture

[1] Farms with sales of $50,000 or more in 1971.